Determination of Public Land (Rangeland) Health for 65095 BRITTAIN SEC15

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within the Brittain Sec 15 allotment #65095 meets the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard will not be addressed.

/s/ T. R. KREAGER	08/10/2004
Assistant Field Manager	Date

Standards of Public Land Health
Evaluation of 65095 BRITTAIN SEC15 Allotment
[01/05/2004]

The Roswell Field Office conducted rangeland health assessments at one study site within the Brittain Sec 15 Allotment #65095. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
65095-JT157-C062 (*)	X	*		X	*		N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for the Brittain Sec 15 allotment; 10 of these assessed soil/site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments along with quantitative information from two areas on the allotment were utilized to assess the rangeland health of the public land within the allotment. This allotment is a "C" category (custodial) because of the small amount of public land within the allotment.

While drought over the past three years has had an impact on these sites, the assessment of the indicators range from Moderate-Extreme down to Slight to None. Annual Prodction and Bare Ground indicators were rated moderate-extreme this rating are influenced by the current droughty conditions and are expected to improve as the area climatic conditions improve. Prickly pear appears to be on the increase (invasive plants. The presence of prickly pear is extensive in both areas but does not appear to be connected with disturbance (at least recent disturbance). Overall the condition of the public land on the allotment are in a stable state.

To some extent the hydrologic function (overland water flow) has been impacted by the increased oil/gas activities and the associated road development in this area.

Wildlife - Evaluation of the integrity of the biotic community considered several indicators as attribute indices for the area of interest. Biotic indicators are interrelated with several other indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as Functional/Structural Groups, Annual Production and Invasive Plants.

Annual production fell within the Moderate to Extreme rating. Litter amount and invasive plants had a rating of Moderate. Considering present climate regimes, these indicators can be expected to fall within the normal range of variability. The composition of vegetation reflects current climatic conditions, e.g., drought for the past several years. Range site production and cover of a variety of preferred plant species for wildlife, such as forbs and woody browse species, and the availability of seed for food and regeneration, is moderated by climate and land use (livestock grazing and oil and gas development). Rangeland conditions must be closely monitored to detect any further downward trend, exclusive of the impacts of ongoing climatic conditions (drought). The potential to improve rangeland conditions exists especially when timed with adequate precipitation and vegetation reproduction.

In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. Wildlife Habitat rated Moderate, primarily due to the lack of vegetation production and newly developed oil and gas facilities in the area of concern. Population indicators rated Slight to Moderate, primarily for pronghorn antelope and a variety of non-game terrestrial species. With respect to Special Status Species, none are known to occur in the area of interest at this time and the Habitat and Population indicators are, therefore, rated None to Slight.

Hydrology - Pasture JT157 - The water flow patterns indicator rated as moderate. Erosion is occurring with some instability and deposition. The pedestals and/or terracette indicator rated as moderate. The recent dry conditions in combination with wind and water erosion has possibly decreased the amount of plant cover and possibly decreased infiltration into the soils which may have increased the amount of pedestaling of plants and rocks. The bare ground indicator rated as moderate to extreme. The amount of bare ground has possibly increased due to recent dry conditions and also wind and water erosion processes. The litter movement indicator rated in the moderate category. The decrease in litter movement suggests that the dry conditions have had a negative affect on the growing conditions which decreases the amount of litter that is produced and litter movement. Soil surface resistance to erosion rated in the moderate category. Organic matter is lacking on this site, but this is expected for an area that has a small amount of litter present. The soil surface loss or degradation has rated out as moderate. The recent dry conditions, decrease in the strength of physical crusts and or absence of soil crusts, wind velocity, surface dryness, and the decreased amount of surface plant cover has possibly increased soil surface loss to degradation. The litter amount rated in the moderate to extreme category. The decrease in litter amount suggests that the dry conditions have had a negative affect on the growing conditions which decreases the amount of litter that is produced. Additionally, the decrease in litter amount can have the effect of increasing the amount of bare soil. All other indicators rated as none to slight or slight to moderate. Gypsum, dolomite, and siltstone deposits of the Seven Rivers Formation outcrop in the area.

In the professional opinion of the Assessment Team, the public land within the allotment meets the Upland and Biotic Standards. The Riparian Standard does not apply to this area.

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Bare Ground
- Annual Production

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Recommendations:

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 65095-JT157-C062			
Legal Land Desc	NENW 21 0100S 0260E Meridian 23	Acreage	195
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060007010 GOPHER		
Observers	BAGGAO/SPAIN	Observation Date	01/13/2004
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	HMA	Soil Taxon Name	HOLLOMEX
Texture Class	NM644	Soil Phase	HOLLOMEX-REEVES-MILNER
Texture Modifier	NM644 LOAM,DRY		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	11.25	NOAA Growing Season Precipitation	7.64
NOAA Avg Annual Precipitation	13.55	NOAA Avg Growing Season Precipitation	11.18
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns			X		
Comments:						

S H	Pedestals and/or Terracettes			X		
Comments:						
S H	Bare Ground		X			
Comments:						
S H	Gullies				X	
Comments:	Associated with older two track roads					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement			X		
Comments:						
S H B	Soil Surface Resistance to Erosion			X		
Comments:						
S H B	Soil Surface Loss or Degradation			X		
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	Patchy and grama grass very low					
B	Plant Mortality/Decadence				X	
Comments:						

H B	Litter Amount			X		
Comments:	Affected by lack of production due to drought					
B	Annual Production		X			
Comments:						
B	Invasive Plants			X		
Comments:						
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:						
B	Wildlife Habitat				X	
Comments:	Grassland habitat type with increasing oil and gas activity and developments.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time. Species of concern include pronghorn antelope and a variety of non-game terrestrial wildlife species.					
B	Special Status Species Habitat					X
Comments:	None know to occur.					
B	Special Status Species Populations					X
Comments:	None know to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to	Moderate	Slight to Moderat	None to

			Extreme		e	Slight
S	Soil	0	1	4	2	3
H	Hydrologic	0	1	6	2	2
B	Biotic	0	1	5	4	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

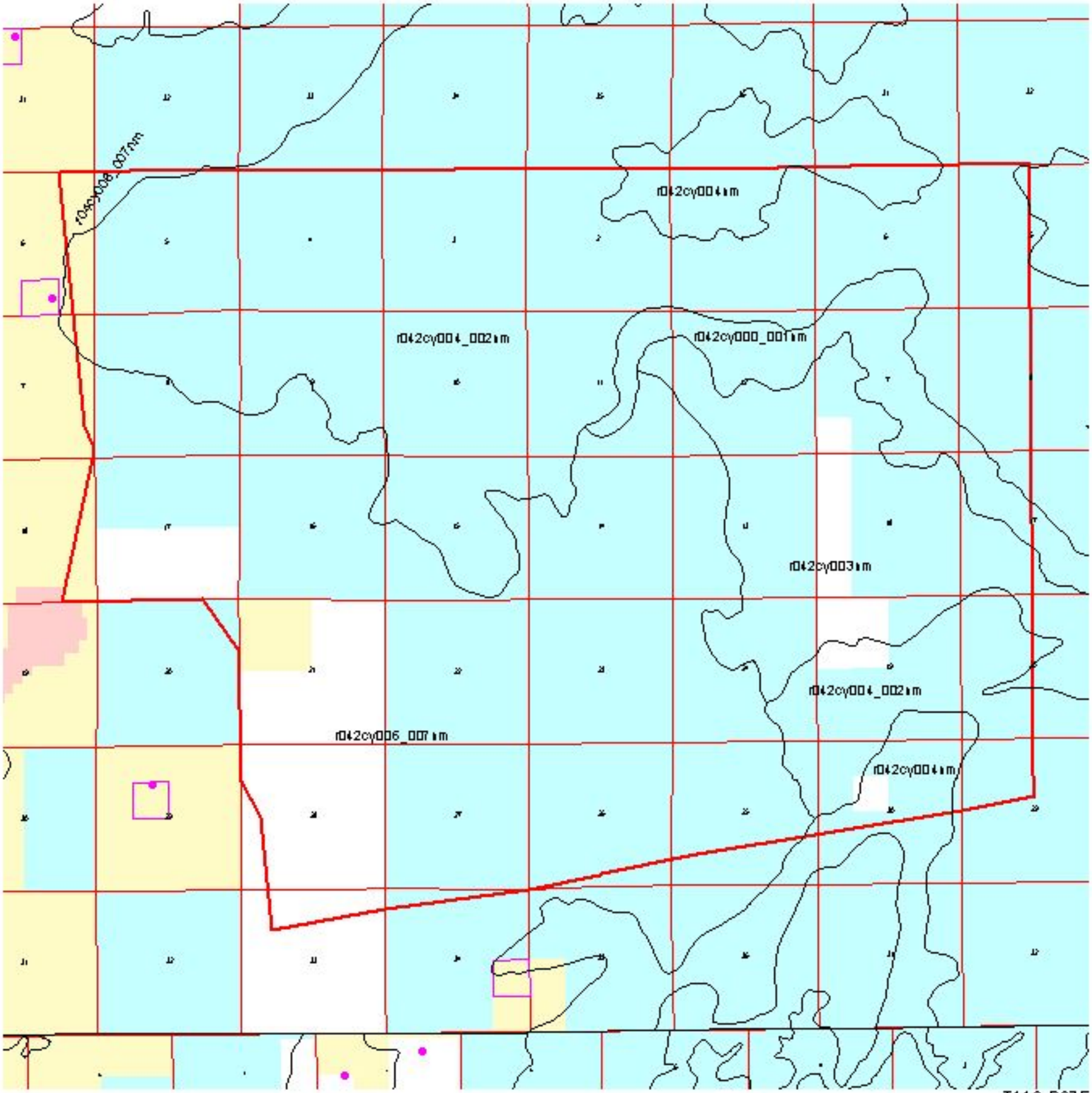
Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Drought conditions over the past three have influenced the indicator ratings. Conditions are holding and should improve in the long term.	1	4	5
Hydrologic	Drought conditions over the past three have influenced the indicator ratings. Conditions are holding and should improve in the long term.	1	6	4
Biotic	Drought conditions over the past three have influenced the indicator ratings. Conditions are holding and should improve in the long term.	1	5	7

Site Notes: Increasing oil and gas development

Rangeland Health Assessment
Ecological Sites

Allotment 65095

T9S.R26E



T11S.R27E

0.6 0 0.6 Miles

Public

Study Plots

State

Private

Study Locations

Ecological Site Boundary

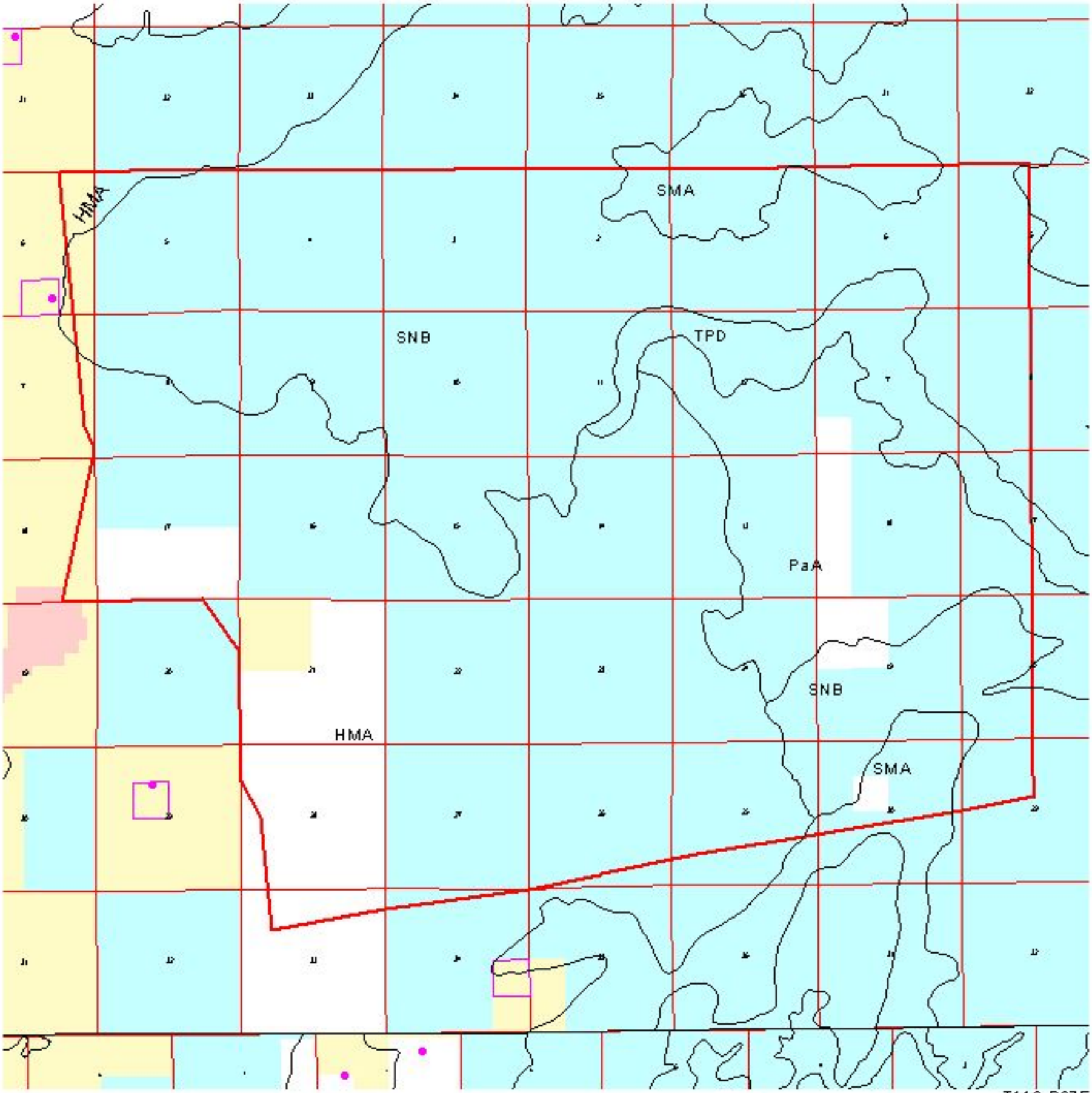
Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 9, 2003.

Rangeland Health Assessment
Soil Mapping Units

Allotment 65095

T9S.R26E



T11S.R27E

0.6 0 0.6 Miles

Public
Study Plots
State
Private
Study Locations
Soil Unit Boundary
Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 9, 2003.